

Serial No. 10/035,990
Atty Docket: 60,598-003

REMARKS

No new matter is added by this amendment. The present application was filed on December 31, 2001 and claims priority to U.S. Provisional Patent Application Serial No. 60/259,003 filed December 29, 2000 and is a continuation-in-part application of U.S. Patent Application Serial No. 08/949,213. The present application was filed with original claims 1-59. In a first previous amendment, claims 1, 9, 11, 15, 40, 51, and 54 were amended and new claims 60-65 were added. In a second previous amendment, claims 1, 9, 11, 15, 40, 51, and 60-65 are amended. By this amendment, claims 55 and 56 are amended. The claims remaining in consideration are claims 1-65. Reconsideration is respectfully requested.

The Examiner indicated that claims 40-50 were allowed and that claims 4, 5, 10, and 17-31 contained allowable subject matter. This is noted with appreciation.

Claims 55-56 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claims 55 and 56 to correct the deficiency noted by the Examiner. Applicants respectfully assert that the claim language now complies with the second paragraph of §112 and request that the §112 rejection of claims 55 and 56 be withdrawn.

Claims 1-3, 6-8, 11-16, 32-39, 51-60, and 62-65 were rejected under 35 USC §102(b) as being anticipated by US Patent 3,147,617 issued September 8, 1964 to Vincent Kaptur et al (Kaptur). This rejection is respectfully traversed.

Kaptur discloses an accommodation checking device. The Kaptur device includes a lower leg member 38, a set pan 66, and a pack pan 108 (See Figs. 1 and 2). The lower leg member 38 includes a pair of leg members 42. A cross-sectional shape of a shoe 26

Serial No. 10/035,990
Atty Docket: 60,598-003

lies between the leg members 42. The seat pan 66 has a lower outer surface 68 which is "shaped to conform to the lower surface of the upper leg portions or thighs and buttocks of the predetermined human male". The back pan 108 has a rear outer surface 110 "which is shaped to conform to the contour of the outer surface of the back".

It should be noted that neither the seat pan 66 nor the back pan 108 are cross-sectional sections of the respective portions of the "predetermined human male", but represent the entire contour of the respective portion.

Claims 1, 11, 15, 51, 60 and 62-65 are independent claims.

The present invention as set forth in independent claim 1, sets forth a design template for use with a seat. The design template includes a torso section and at least one cross-sectional section of the torso. The torso section of the design template represents a torso and includes at least one anatomical landmark. The at least one cross-sectional section *represents a cross-section of the torso* and cooperates with the torso section at the anatomical landmark. The cross-sectional section is generally at a right angle to the torso section. The torso section and the cross-sectional section describe a body seat interface at the at least one anatomical landmark. The anatomical landmark is located on the body seat interface. The body seat interface is three dimensional.

As discussed above, *Kaptur does not include a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 1.* Since Kaptur does not include at least one element of independent claim 1, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn. Claims 2-3 and 6-8 are dependent upon allowable claim 1. Therefore, for the reasons set forth above, and based on their own merits, applicants respectfully assert that claims 2-3 and 6-8 are also allowable.

Serial No. 10/035,990
Atty Docket: 60,598-003

The present invention as set forth in independent claim 11 sets forth a method of establishing accommodation criteria in a vehicle package based on a predetermined class of vehicles. The method includes the step of providing a design template. The design template includes a torso section and at least one cross-sectional section of the torso. The torso section of the design template represents a torso and includes at least one anatomical landmark. The at least one cross-sectional section cooperates with the torso section at the anatomical landmark and represents a cross-section of the torso. The cross-sectional section is generally at a right angle to the torso section. The torso section and the cross-sectional section describe a body seat interface at the at least one anatomical landmark. The anatomical landmark is located on the body seat interface. The body seat interface is three dimensional.

As discussed above, *Kaptur does not include the step of providing a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 11.* Since Kaptur does not include at least one step of independent claim 11, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn. Claims 12-14 are dependent upon allowable claim 11. Therefore, for the reasons set forth above, and based on their own merits, applicants respectfully assert that claims 12-14 are also allowable.

The present invention as set forth in independent claim 15 sets forth a method for designing a seat. The method includes the step of selecting at least one design template. The design template includes a torso section and at least one cross-sectional section of the torso. The torso section of the design template represents a torso and includes at least one anatomical landmark. The at least one cross-sectional section cooperates with the torso

Serial No. 10/035,990
Atty Docket: 60,598-003

section at the anatomical landmark and represents a cross-section of the torso. The cross-sectional section is generally at a right angle to the torso section. The torso section and the cross-sectional section describe a body seat interface at the at least one anatomical landmark. The anatomical landmark is located on the body seat interface. The body seat interface is three dimensional.

As discussed above, *Kaptur does not include the step of selecting a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 15.* Since Kaptur does not include at least one step of independent claim 15, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn. Claims 16 and 32-39 are dependent upon allowable claim 15. Therefore, for the reasons set forth above, and based on their own merits, applicants respectfully assert that claims 16 and 32-39 are also allowable.

The present invention as set forth in independent claim 51, sets forth a seat. The seat includes at least one portion which is designed relative to a design template. The design template includes a torso section and at least one cross-sectional section of the torso. The torso section of the design template represents a torso and includes at least one anatomical landmark. The at least one cross-sectional section cooperates with the torso section at the anatomical landmark and represents a cross-section of the torso. The cross-sectional section is generally at a right angle to the torso section. The torso section and the cross-sectional section describe a body seat interface at the at least one anatomical landmark. The anatomical landmark is located on the body seat interface. The body seat interface is three dimensional.

Serial No. 10/035,990
Atty Docket: 60,598-003

As discussed above, *Kaptur does not include a seat with at least one portion designed relative to a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 51.* Since Kaptur does not include at least one element of independent claim 51, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn. Claims 52-59 are dependent upon allowable claim 51. Therefore, for the reasons set forth above, and based on their own merits, applicants respectfully assert that claims 52-59 are also allowable.

The present invention as set forth in independent claim 60 sets forth a design template for use with a seat. The design template includes a torso section representing a torso and at least one cross-sectional section cooperating with said torso section at the anatomical landmark. The torso section has at least one anatomical landmark. The at least one cross-sectional section cooperates with the torso section at the anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section and describes a body seat interface at the at least one skeletal landmark. The anatomical landmark is located on the body seat interface, which is three dimensional.

As discussed above, *Kaptur does not include a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 60.* Since Kaptur does not include at least one element of independent claim 60, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn.

The present invention, as set forth in claim 62, sets forth a method of establishing occupant accommodation criteria in a vehicle package based on a predetermined class of vehicles. The method includes the step of providing a design template having a torso

Serial No. 10/035,990
Atty Docket: 60,598-003

section representing a torso, a leg section and at least one cross-sectional section of the torso. The torso section has at least one anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section and cooperates with the torso section at the anatomical landmark to provide a three-dimensional body seat interface. The anatomical landmark is located on the body seat interface.

As discussed above, *Kaptur does not disclose or teach a method which includes the step of providing a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 62.* Since Kaptur does not include at least one step of independent claim 62, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn.

The present invention as set forth in independent claim 63 sets forth a method for designing a seat including the step of providing at least one design template having a torso section representing a torso, a leg section, at least one cross-sectional section of the torso. The torso section has at least one anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section and cooperates with the torso section at the anatomical landmark to provide a three-dimensional body seat interface. The anatomical landmark is located on the body seat interface.

As discussed above, *Kaptur does not disclose or teach a method which includes the step of providing a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 63.* Since Kaptur does not include at least one step of independent claim 63, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn.

Serial No. 10/035,990
Atty Docket: 60,598-003

The present invention as set forth in independent claim 64 sets forth of using a design template to design a vehicle seat. The method includes the steps of providing at least one design template and establishing occupant accommodation criteria. The torso section represents a torso and at least one cross-sectional section of the torso. The torso section has at least one anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section and cooperates with the torso section at the anatomical landmark to provide a three-dimensional body seat interface. The method further includes the steps "defining at least one unloaded patch on the seat at a predetermined position" and "defining at least one of a seat back height, seat cushion length, head restraint position, shoulder patch, thorax patch, lumbar patch, bite line patch, ischial patch, thigh patch, seat cushion bolster, and seat suspension for the seat relative to the design template".

As discussed above, *Kaptur does not disclose or teach a method which includes the step of providing a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claim 64.* Since Kaptur does not include at least one step of independent claim 64, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn.

The present invention as set forth in independent claim 65 sets forth a seat having at least one portion being defined relative to a design template having a torso section representing a torso and at least one cross-sectional section of the torso. The torso section has at least one anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section and cooperates with the torso section at the anatomical

Serial No. 10/035,990
Atty Docket: 60,598-003

landmark to provide a three-dimensional body seat interface. The anatomical landmark is located on the body seat interface.

As discussed above, *Kaptur does not disclose or teach a seat having at least one portion being defined relative to a design template having a torso section representing a torso and at least one cross-sectional section of the torso as required by independent claim 65.* Since Kaptur does not include at least one element of independent claim 65, applicants respectfully assert that the §102(b) rejection is improper and request that it be withdrawn.

Claims 9 and 61 were rejected under 35 USC §103(a) as being unpatentable over Kaptur in view of by "Kinetic Computer Modeling of Human Posture in Automotive Seats" by Ekern ("Ekern"). This rejection is respectfully traversed.

Ekern discloses (1) an SAE 2-D Drafting Template (Figure 1), (2) an SAE 3-D Testing Manikin, (3) a 2-D computer model.

Independent claim 9 sets forth an occupant restraint system for a seat which includes a lap belt and a shoulder belt anchored to vehicle structure relative to a design template. The design template includes torso section and at least one cross-section section. The torso section represents a torso. The at least one cross-sectional section cooperates with the torso section at an anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section and describes a body seat interface at the at least one anatomical landmark. The anatomical landmark is located on the body seat interface which is three dimensional.

The present invention as set forth in independent claim 61 sets forth an occupant restraint system for a seat which includes a lap belt and a shoulder belt. The lap belt and the should belt are anchored to vehicle structure relative to a design template. The design

Serial No. 10/035,990
Atty Docket: 60,598-003

template includes a torso section and a cross-sectional section. The torso section represents a torso and has at least one anatomical landmark. The at least one cross-sectional section cooperates with the torso section at an anatomical landmark and describes a body seat interface at the at least one anatomical landmark. The at least one cross-sectional section is generally at a right angle to the torso section. The anatomical landmark is located on the body seat interface, which is three dimensional.

As discussed above, Kaptur does not teach a design template as required by independent claims 9 and 61. Ekern discloses (1) an SAE 2-D Drafting Template (Figure 1), (2) an SAE 3-D Testing Manikin, (3) a 2-D computer model and does not overcome the shortcomings of Kaptur. Since neither Kaptur nor Ekern disclose at least one element of independent claims 9 and 61, applicants respectfully assert that the §103(a) rejection of independent claims 9 and 61 is improper and request that it be withdrawn.

As discussed above, *neither Kaptur nor Ekern disclose or teach an occupant restraint system anchored to vehicle structure relative to a design template with a torso section representing a torso and a cross-sectional section of the torso, both of which define a body seat interface as required by independent claims 9 and 61.* Since neither Kaptur nor Ekern include at least one element of independent claims 9 and 61, applicants respectfully assert that the §103(a) rejection is improper and request that it be withdrawn.

Response to Examiner's Characterization of Kaptur

The Examiner characterizes Kaptur as:

Kaptur, Jr. teaches a design template is [sic] used to check a seat within a vehicle, the template including a torso section 108 representing a torso of an average size (see col. 2, line 4) and inherently employing a posture (see Figure 1) and a waist (the waist viewable in Figure 6 adjacent the "108", and indirectly referred to in the teaching that the rear outer surface 110 of the pan 108 confirms [sic] to the

Serial No. 10/035,990
Atty Docket: 60,598-003

contour of the outer surface of the back of a predetermined human male, on col. 3, lines 33-39. The template including at least one cross-sectional section of the torso cooperating with said torso section torso at the waist, the at least one cross-sectional section representing a cross-section of the torso and being generally at a right angle to the torso section and describing a body interface at the least one anatomical landmark, the landmark being location on the body seat interface, the body seat interface described by the torso section and the at least one cross-sectional section being three-dimensional.

Page 2, fourth full paragraph.

Apparently, the Examiner is equating the back pan (element 108) of Kaptur with the torso section of the design template of the present invention. The Examiner then attempts to meet the cross-sectional section of the design template, using Kaptur, by reciting back the claim language. However, the Examiner does not identify the elements of Kaptur which meet the cross-section section element of the present invention.

Later, the Examiner seems to suggest that the seat pan 66 meets the cross-sectional section. If so, then the Examiner's arguments must fail. The seat pan has an outer surface 68 "shaped to conform to the lower surface of the upper leg portions or thighs and buttocks" (column 2, lines 71-72). The back pan 108 of Kaptur has a rear outer surface 110 "which is shaped to conform to the contour of the outer surface of the back of the predetermined human male" (column 3, lines 35-37). Thus, neither the seat pan 66 nor the back pan 108 is a cross-sectional section of the torso. Kaptur fails to disclose torso section and a cross-sectional section of the torso as required by the design template of the present invention.

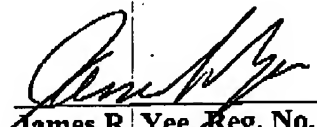
All of the Examiner's objections and rejections having been successfully traversed or made moot, applicants respectfully assert that the present application is now in condition for allowance. An early Notice of Allowance is respectfully requested.

Serial No. 10/035,990
Atty Docket: 60,598-003

If any fees are due with this submission, or at anytime during the pendency of this application, the Commissioner is hereby authorized and respectfully requested to charge our Deposit Account 08-2789.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.



James R. Yee, Reg. No. 34,460
39400 Woodward Avenue, Suite 101
Bloomfield Hills, Michigan 48304-5151
(248) 723-0349

Dated: July 19, 2004